

CLAIMS

1. A photonic circuit board comprising a connection setting circuit, a group of electric wires for connecting the connection setting circuit and a plurality of devices, an optical I/O device connected to the connection setting circuit and a two dimensional optical transmission medium connected to the optical I/O device and adapted to transmit optical signals, the connection setting circuit including a circuit capable of changing the mode of connection of said group of electric wires and said optical I/O device.

2. A photonic circuit board according to claim 1, wherein said connection setting circuit is a reconfigurable integrated circuit.

3. A photonic circuit board according to claim 2, wherein said reconfigurable integrated circuit is formed by using a field programmable gate array.

4. A photonic circuit board according to claim 1, wherein said connection setting circuit is so arranged that a number of electric wires of the group of electric wires are connected to a single optical I/O device.

5. A photonic circuit board according to claim
1, wherein said connection setting circuit is so
arranged that the number of optical I/O devices is
smaller than the number of electric wires of the
5 group of electric wires.

6. A photonic circuit board according to claim
1, wherein said optical I/O device is a photonic ball
IC.

10 7. A semiconductor apparatus, wherein a number
of electronic devices are connected to the group of
electric wires according to claim 1.